

March 7, 1996

Monsanto

SF 2.1
AR 2.1
RECEIVED

MAR 8 0 1996

Mr. Randy Smith
Branch Chief, Cleanup Office
USEPA Region 10
1200 Sixth Avenue (HW-113)
Seattle, Washington 98101

The Chemical Group
800 N. Lindbergh Boulevard
St. Louis, Missouri 63167
Phone: (314) 694-1000

VIA FEDERAL EXPRESS

Dear Mr. Smith:

Since our presentation to EPA on December 13, 1995, we have considered how to respond to your question related to the appropriate risk management criteria to be used to select a remedy for the Soda Springs Plant. It is our opinion that EPA's risk management criteria should address two major issues which are timely given the national Superfund reauthorization debate about the risk assessment work: (1) do the standard EPA risk assessment models, assumptions, and pathways match the actual site conditions at Soda Springs; and (2) how the predicted risks compare to the costs, environmental impacts, actions which have been taken voluntarily, and other attributes of the proposed remedial actions. When these actions are considered in the context of risk management, we believe there is a strong case to delist the site from the NPL and continue certain actions voluntarily.

The Appropriateness of EPA's Baseline Risk Assessment

We see three risk management decisions concerning the risk assessment itself. The first risk management decision concerns the likelihood of certain risk characterization scenarios. Monsanto continues to be concerned about some of EPA's fundamental assumptions regarding future exposures. The key assumption is that, in the future, Monsanto's operating facilities will be shut down, resulting in an order-of-magnitude increase in the Baseline Risk Assessment (BRA) risks. This assumption does not have a factual basis and represents an implicit risk management decision on EPA's part that should be reconsidered.

The risk manager must weigh the likelihood of the Soda Spring Plant's closure. Monsanto has facilities that were in operation before the Civil War and expects to be operating far into the 21st century. The Soda Springs Plant is an integral part of one of Monsanto's major product lines, Roundup™, and will be operating for a very long time. It will be operated in compliance with all environmental regulations that will be evolved in the intervening years. Monsanto has a proven track record of equaling or exceeding these safeguards. Even if closure occurs, there is no reason to believe the property will be abandoned. Monsanto has reiterated a commitment to responsible closure in the Feasibility Study. Therefore, we believe one of EPA's risk management decisions is how likely it is that the Plant will be completely abandoned to a second industry -- the scenario modeled in EPA's Baseline Risk Assessment (BRA).

March 7, 1996

1

AR 2.1

42034

USEPA SF



1039579

Similarly, the Future Residential scenario has little likelihood of occurrence. Soda Springs enjoys plentiful land and potable water resources, making risk-estimating scenarios associated with the idea of constructing residences or ground-water supply wells adjacent to our fence line highly unlikely, and implausible. As you may be aware, Monsanto has undertaken a careful purchasing program to develop a buffer of land surrounding the Soda Springs Plant. The land cost in itself is prohibitive to residential development around the plant, adding to the implausibility of the BRA's assumptions.

The second risk management decision concerns the risk assessment methodology. As you know, we prepared a stochastic risk assessment (SRA) to add depth to EPA's BRA. The deterministic methodology in EPA's Risk Assessment Guidelines has always been a simplification of a full stochastic approach. As risk assessment methods and data have improved, the Agency has encouraged uses of stochastic methods in order to provide more complete information to risk managers. Therefore, a risk management decision is to decide which technique provides the most complete information about the site. This decision is important since the two techniques yield different results in the Future Occupational and Residential Scenarios.

The risk estimates in the BRA are up to three orders-of-magnitude higher than the SRA estimates for these scenarios. As shown in the table below, the results of the SRA indicate that even the worst-case locations within and adjacent to the Plant will not warrant further action.

TABLE 1. SUMMARY OF RISK ASSESSMENT RESULTS
COMPARING SRA WORST-CASE GRIDS TO BRA
(DIRECT SUBPOPULATION TO SUBPOPULATION COMPARISONS)

Exposure Scenario	ILCR0.95 - Worst-Case SRA Grid Estimates ^a	Comparable BRA ILCR Estimates
Occupational:		
Future (Grid 34 - Slag Pile)	5×10^{-5}	2×10^{-3}
Residential:		
Future (Grid 74 - Northern 1)	5×10^{-6}	2×10^{-3}

^a 95th percentile of the incremental lifetime cancer rate distribution for an individual selected at random from the grid subpopulation. Grid 34 is the slag pile, and Grid 74 is equivalent to the BRA's Northern Residence I location; these locations clearly represent worst-case estimates.

The primary reason for the differences is methodology (i.e., the representation of uncertain variables with point estimates rather than with probability distributions). The SRA includes models of both Monsanto's and EPA's perspectives on future exposure scenarios. However, the fundamental risk management decision remains as to which methodology best characterizes the potential risks from the site.

We believe the third risk management decision is to view the results of the risk assessment models in comparison to the actual environmental conditions. After decades of Plant operations, Soda Springs, Idaho, enjoys a cancer rate among the lowest, not only in Idaho, but in the entire country. The reevaluation and update of the ecological risk assessment indicates that there are no significant adverse site-related ecological impacts. Where site-related findings are above background levels, these levels are within the range found under natural settings elsewhere in Idaho. We believe EPA's risk management criteria must weigh the predictions of models with its observations of actual conditions.

Despite the fact that Monsanto disagrees with any assumptions based on a shutdown of the Plant, we have modeled EPA's vision of the future occupational perspective and still find that the high-end risk estimate for tomorrow's workers does not exceed 10^{-5} . Similarly, when evaluating the worst-case location or subpopulation from a future residential perspective (people living on the north fence line), we find that the high-end risk estimate for these residents (who we do not believe will ever exist) does not exceed 10^{-6} .

Balancing the Predicted Risk With Other Factors

Based on our risk assessment work and the extensive data gathered from the site, we are confident that the risks posed by the site under likely exposure scenarios lie within EPA's acceptable risk range. Therefore, we believe the best course of action is to delist the site from the NPL. We recognize that OSWER Directive 9355.0-30 states that the EPA "risk manager may also decide that a baseline risk level less than 10^{-4} is unacceptable due to site-specific reasons and that remedial action is warranted." However, the site conditions do not support any remedial action, but rather support delisting it.

Three specific risk management considerations reinforce our view. First, the risk manager must consider whether these low predicted risks will increase in the future. Monsanto has taken major efforts to reduce occupational and potential off-site exposures, including the following:

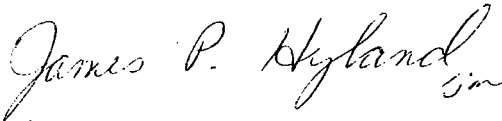
- Monsanto has expended approximately \$6M during the past 10 years to voluntarily implement investigations, remedial actions, and facility modifications, in addition to the approximately \$6M expended directly to the CERCLA process. We also have committed significant resources to future environmental projects, such as implementing new dust control measures for our stockpiled materials;
- Where site-related findings show impacts above background levels, Monsanto has identified and corrected these practices to bar future occurrence;
- Monsanto has established a track record with the OSHA for a safe workplace, achieving STAR status; and
- Monsanto has a long history of both compliance with environmental regulatory requirements and voluntary process controls and other improvements; in fact, our air emissions controls programs are recognized as potential best available control technology within our industry.

Second, since no action is without consequence, the risk manager must consider the impact of potential remedies. Remediation of off-site soils, for example, could have substantial impacts. Excavation of over 890,000 cubic yards of topsoil would disrupt farming and take this valuable resource out of production. Although Monsanto would of course comply fully with all applicable environmental and worker safety protections, the scale of this activity could lead to worker injury, traffic accidents, and air pollution in the community. We question whether the risk reduction achieved warrants this type of remedy.

Third, the risk manager should consider whether the risk reduction can occur at very low cost. As the recently completed Phase III Feasibility Study indicated, all of the potential remedies have significant present worth costs, ranging from \$0.6 million to \$68 million. Thus, there are no "low-cost" ways to reduce the very low levels of risk. Further, spending funds on remedial action diminishes our ability to finance other, more beneficial environmental projects.

In summary, the risk manager must evaluate the appropriateness of the assumptions and methodology of the risk assessment and compare the model results with actual observed conditions. In addition, the risk manager must weigh the risk assessment results with other social and economic factors. We appreciate your invitation to dialogue on the risk management process, and we look forward to meeting with you to discuss these issues further. We hope and trust that we can continue to work constructively together with EPA to bring the CERCLA process to a successful conclusion.

Sincerely,

A handwritten signature in cursive script that reads "James P. Hyland". There is a small mark at the end of the signature that looks like "sm".

James P. Hyland

c: M. O'Bannon
K. Lott, 1850
P. Wright, E2NR
R. Geddes, 1850